

Samsung- GLOBALFOUNDRIES 14nm Collaboration

April 2014



Introducing : Samsung and GLOBALFOUNDRIES Collaboration

A **new strategic collaboration** between Samsung and GLOBALFOUNDRIES

Provides **unprecedented global capacity** for leadership 14nm FinFET technology

Gives customers **choice and assurance of supply** that can only come from **true design compatibility** at multiple sources across the globe

Addressing industry needs with a **necessary advancement of the foundry supply chain model**

Covers both **14LPE and 14LPP**, the leading choice for high-volume, power-efficient SoC designs



Power Efficiency Driving FinFET Technology Adoption

Mobile and Wireless Applications

Extend Battery Life



Computer, Network, Storage Applications

Reduce Energy OPEX

Meet Thermal Constraints

Improve Reliability

Reduce Carbon Footprint

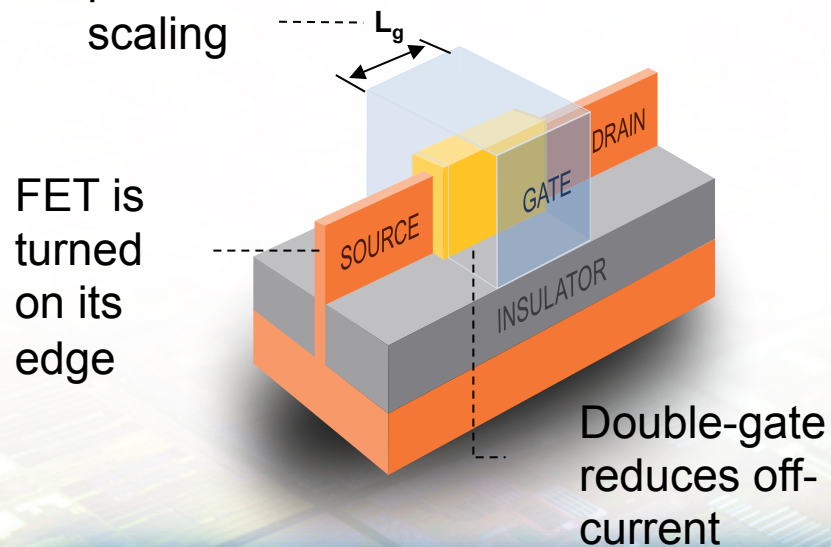


All while increasing performance!



14nm FinFET Offers Breakthrough Power/Performance

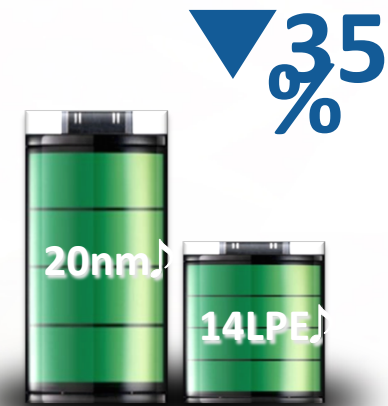
Gate length shrink
enables
performance
scaling



Performance



Power



Intrinsically operates at a lower supply voltage

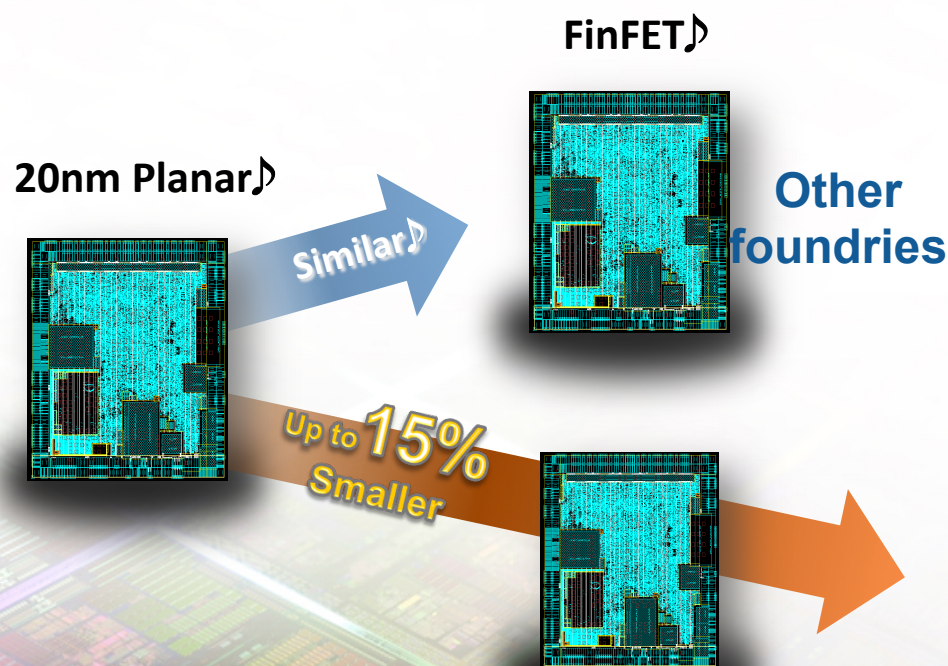
Lowest off-state leakage

Faster switching speed

Delivering Maximum Value with Leadership 14nm

- Aggressive gate pitch
- Smallest memory solution
- Innovative layout schemes for compact logic

➔ **Smallest Area**



Meeting the Growing Market Demand

Mobility and Wireless



**LOWER
WATTS
PER GHz**

Smartphone
Tablet
Mobile PC

Computer, Network and Storage



**MORE
PERFORMANCE
PER WATT**

Ethernet Switch
Fiber Access
Base Station
Wireless Access
Data Center

~\$25B

**2017 Advanced Node
Projected TAM**

Source: Gartner Foundry Supply & Demand 4Q13 Update

Mobile data traffic
Increasing exponentially

Pressure of increased bandwidth
through the infrastructure

Increasing need to efficiently
scale out of the infrastructure



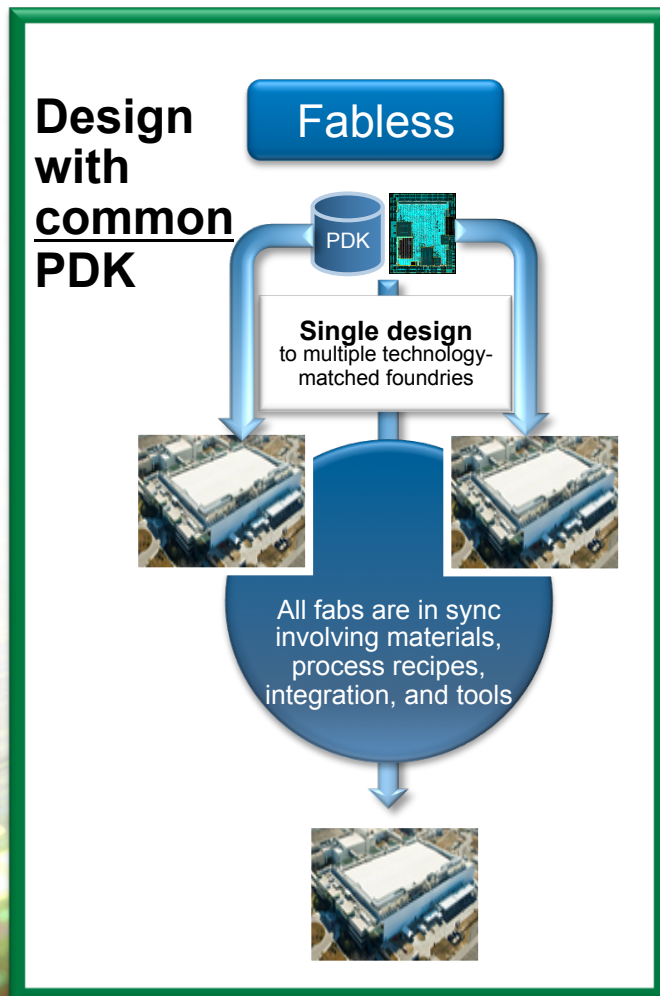
Satisfying FinFET Demand with Global Capacity



**4 leading-edge fabs
on two continents**



We are Advancing the Supply Chain Model



New model – Single design, Flexible sourcing

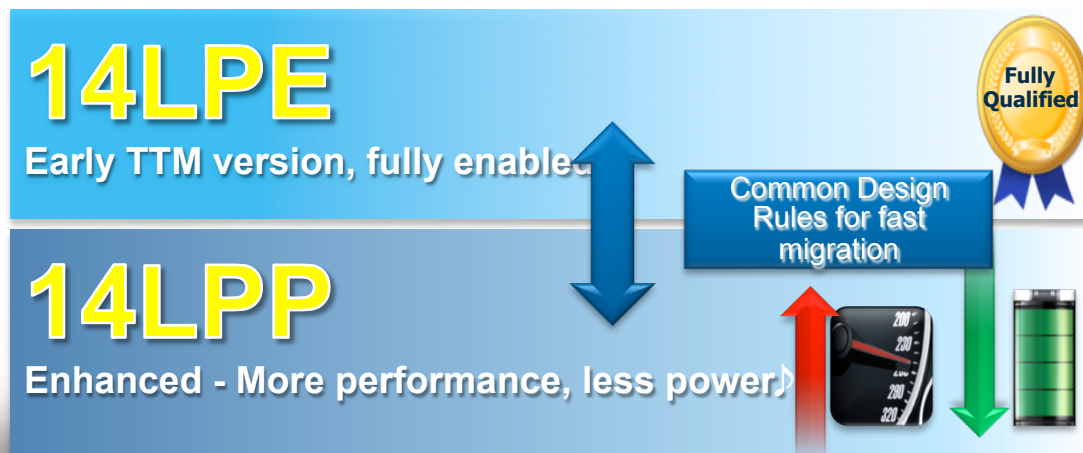
Technology information shared

Fab synchronized

Concurrent source(s) bring up

Risk mitigated production ramp

Ready for Design In, Ramping by end 2014



14LPE qualified in Feb2014

14LPE & 14LPP PDK

Released

MPW shuttles available

Libraries and IPs

Design Kits Ready

Prototyping now,

Mass production by end

2014



Recap of Today's Announcement

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